

In response to that Office Action, please amend the above-identified application as follows:

IN THE CLAIMS

Please cancel Claims 1-42, 54, 70, 81-90, 96, and 112 without prejudice and without disclaimer of subject matter.

Please amend Claims 43, 44, 46-52, 55, 56, 58-60, 62-68, 71, 72, 74-76, 78-80, 91-94, 97-102, 104-110, and 113-120 as follows (a version of those claims, marked to show the changes, is appended):

41.

~~43.~~ (Amended) A method of compressing data, wherein said

data comprises a plurality of transform coefficients, and each transform coefficient is expressible in a format including a plurality of bit symbols, the format comprising a number of leading zero bit symbols and retaining bit symbols, the method comprising the steps of:

(a) entropy encoding a number representative of said number of leading zero bit symbols, not previously entropy coded, of a current transform coefficient based on a number of transform coefficients or part thereof surrounding said current transform coefficient; and

(b) processing another transform coefficient, not previously entropy coded, in accordance with step (a).

42.  
~~44.~~ (Amended) A method as claimed in claim ~~43~~<sup>41</sup> wherein the entropy encoding of the number representative of the number of leading zero bit symbols of a current transform coefficient is based on a context of a number of transform coefficients or part thereof surrounding the current transform coefficient.

44.  
~~46.~~ (Amended) A method as claimed in claim ~~43~~<sup>41</sup>, wherein said representative number equals the number of leading zero bit symbols.

45.  
~~47.~~ (Amended) A method as claimed in claim ~~44~~<sup>45</sup>, wherein said context is determined from an arrangement of surrounding transform coefficients.

46.  
~~48.~~ (Amended) A method as claimed in claim ~~47~~<sup>46</sup>, wherein said surrounding transform coefficients are previously encoded transform coefficients.

47.  
~~49.~~ (Amended) A method as claimed in claim ~~44~~<sup>47</sup>, wherein said context is based on the number of non-zero transform coefficients surrounding said current transform coefficient.

48.  
~~50.~~ (Amended) A method as claimed in claim ~~43~~<sup>41</sup>, wherein said method includes a further step of coding said remaining bit symbols.

49.  
~~51.~~ (Amended) A method of compressing data, wherein said data comprises a plurality of transform coefficients, and each transform coefficient is

expressible in a format comprising a plurality of bit symbols, the method comprising the steps of:

(a) entropy encoding one of said bit symbols, not previously entropy coded, of a current transform coefficient based on a number of surrounding bit symbols and on whether or not the most significant bit symbol of the current coefficient has been previously entropy coded;

(b) repeating step (a) a predetermined number of times for the current transform coefficient; and

(c) processing another transform coefficient, not previously entropy coded, in accordance with steps (a) and (b).

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~~50.~~  
52. (Amended) A method as claimed in claim ~~51~~<sup>49</sup>, wherein said entropy encoding of one or more bit symbols of a current transform coefficient is based on a context of a number of surrounding bit symbols and on whether or not the most significant bit symbol of the current coefficient has been previously entropy coded.

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~~50.~~  
55. (Amended) A method as claimed in claim ~~52~~<sup>50</sup>, wherein said context of surrounding bit symbols includes information as to whether or not a most significant bit of at least one transform coefficient spatially adjacent, to the current transform coefficient, has been encoded.

<sup>54.</sup>  
~~56.~~ (Amended) A method as claimed in claim <sup>49</sup>~~51~~, wherein said transform coefficients are represented in a bit-plane representation and said surrounding bit symbols are bit symbols in a current bit-plane.

<sup>56.</sup>  
~~58.~~ (Amended) A method as claimed <sup>41</sup>~~43~~, wherein said method includes a further step of Discrete Wavelet Transforming data to produce said plurality of transform coefficients.

<sup>57.</sup>  
~~59.~~ (Amended) A method of decompressing data, wherein said data once decompressed comprises a plurality of transform coefficients, and each transform coefficient is expressible in a format including a plurality of bit symbols, the format comprising a number of leading zero bit symbols and remaining bit symbols, the method comprising the steps of:

(a) entropy decoding an encoded number representative of said number of leading zero bit symbols of a current transform coefficient a number of transform coefficients surrounding said current transform coefficient; and

(b) processing another transform coefficient in accordance with step (a).

<sup>58.</sup>  
~~60.~~ (Amended) A method as claimed in claim <sup>51</sup>~~59~~, wherein the entropy decoding of the encoded number representative of the number of leading zero bit symbols of a current transform coefficient is based on a context of a number of transform coefficients or part thereof surrounding the current transform coefficient.

<sup>60.</sup>  
~~62.~~ (Amended) A method as claimed in claim <sup>59</sup>~~59~~, wherein said representative number equals the number of leading zero bit symbols.

<sup>61.</sup>  
~~62~~ (Amended) A method as claimed in claim <sup>60</sup>~~60~~, wherein said context is determined from an arrangement of surrounding transform coefficients.

<sup>62.</sup>  
~~64~~ (Amended) A method as claimed in claim <sup>61</sup>~~63~~, wherein said surrounding transform coefficients are previously decoded transform coefficients.

<sup>63.</sup>  
~~65~~ (Amended) A method as claimed in claim <sup>62</sup>~~68~~, wherein said context is based on the number of non-zero transform coefficients surrounding said current transform coefficient.

<sup>64.</sup>  
~~66~~ (Amended) A method as claimed in claim <sup>63</sup>~~59~~, wherein said method includes a further step of decoding encoded said remaining bit symbols.

<sup>65.</sup>  
~~67~~ (Amended) A method of decompressing data, wherein said data once decompressed comprises a plurality of transform coefficients, and each transform coefficient is expressible in a format comprising a plurality of bit symbols, the method comprising:

(a) entropy decoding an encoded bit symbol of a current transform coefficient based on a number of surrounding bit symbols and on whether or not

the most significant bit symbol of the current coefficient has been previously entropy decoded;

(b) repeating step (a) a predetermined number of times for the current transform; and

(c) generating another transform coefficient in accordance with steps (a) and (b).

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48. (Amended) A method as claimed in claim 47, wherein said entropy decoding of one or more bit symbols of a current transform coefficient is based on a context of a number of surrounding bit symbols and on whether or not the most significant bit symbol of the current coefficient has been previously entropy coded.

49.  
71. (Amended) A method as claimed in claim 48, wherein said context of surrounding bit symbols includes information as to whether or not a most significant bit of at least one transform coefficient spatially adjacent, to the current transform coefficient, is encoded or decoded.

50.  
72. (Amended) A method as claimed in claim 47, wherein said transform coefficients are represented in a bit-plane representation and said surrounding bit symbols are bit symbols in a current bit-plane.

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(Amended) A method as claimed in claim 39, wherein said method includes a further step for inverse Discrete Wavelet Transforming said transform coefficients.

73.  
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(Amended) An apparatus for compressing data, wherein said data comprises a plurality of transform coefficients and each transform coefficient is expressible in a format including a plurality of bit symbols, the format comprising a number of leading zero bit symbols and remaining bit symbols, the apparatus including:

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entropy encoder means for entropy encoding a number representative of said number of leading zero bit symbols, not previously entropy coded, of a current transform coefficient based on a number of transform coefficients or part thereof surrounding said current transform coefficient; and

processor means for processing another transform coefficient, not previously entropy coded, in accordance with the operations of the entropy encoder means.

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(Amended) An apparatus as claimed in claim 75, wherein the entropy encoding of the number representative of the number of leading zero bit symbols of a current transform coefficient is based on a context of a number of transform coefficients or part thereof surrounding the current transform coefficient.

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(Amended) An apparatus as claimed in claim 75, wherein said representative number equals the number of leading zero bit symbols.

77. (Amended) An apparatus as claimed in claim <sup>74</sup>76, wherein said

context is determined from an arrangement of surrounding transform coefficients.

78. (Amended) An apparatus as claimed in claim <sup>73</sup>75, wherein

said surrounding transform coefficients are previously encoded transform coefficients.

79. (Amended) An apparatus as claimed in claim <sup>74</sup>76, wherein said

context is based on the number of non-zero transform coefficients surrounding said current transform coefficient.

80. (Amended) An apparatus as claimed in claim <sup>73</sup>75, wherein said

method includes a further step of coding said remaining bit symbols.

81. (Amended) An apparatus for compressing data, wherein the data

comprises a plurality of transform coefficients, and each transform coefficient is expressible in a format comprising a plurality of bit symbols, the apparatus including:

entropy encoder means for entropy encoding one of said bit symbols, not previously entropy coded, of a current transform coefficient based on a number of surrounding [bits] bit symbols and on whether or not the most significant bit symbol of the current coefficient has been previously entropy encoded;

repetition means for repeating the operation of the entropy encoder a predetermined number of times for the current transform coefficient; and



processor means for processing another transform coefficient in accordance with the operations of the entropy encoder means and repetition means.

<sup>80</sup>  
~~94~~ (Amended) An apparatus as claimed in claim <sup>81</sup>~~93~~, wherein said entropy encoding of one or more bit symbols of a current transform coefficient is based on a context of a number of surrounding bit symbols and on whether or not the most significant bit symbol of the current coefficient has been previously entropy coded.

<sup>85</sup>  
~~97~~ (Amended) An apparatus as claimed in claim <sup>82</sup>~~94~~, wherein said context of surrounding bit symbols includes information as to whether or not a most significant bit of at least one transform coefficient spatially adjacent, to the current transform coefficient, has been encoded.

<sup>86</sup>  
~~98~~ (Amended) An apparatus as claimed in claim <sup>81</sup>~~93~~, wherein said transform coefficients are represented in a bit-plane representation and said surrounding bit symbols are bit symbols in a current bit-plane.

<sup>87</sup>  
~~99~~ (Amended) An apparatus as claimed in claim <sup>73</sup>~~75~~, wherein said entropy encoder means is an arithmetic coder.

<sup>88</sup>  
~~100~~ (Amended) An apparatus as claimed in claim <sup>73</sup>~~75~~, wherein said apparatus further includes a transform means for Discrete Wavelet Transforming data to produce the plurality of transforming coefficients.

89.  
~~701~~

(Amended) An apparatus for decompressing data, wherein said data once decompressed comprises a plurality of transform coefficients and each transform coefficient is expressible in a format comprising a plurality of bit symbols, the format comprising a number of leading zero bit symbols and remaining bit symbols, the apparatus including:

entropy decoder means for entropy decoding an encoded number representative of said number of leading zero bit symbols of a current transform coefficient based on a number of transform coefficients or part thereof surrounding said current coefficient; and

processor means for processing another transform coefficient in accordance with the operations of the entropy decoder means.

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(Amended) An apparatus as claimed in claim ~~701~~ wherein the entropy decoding of the encoded number representative of the number of leading zero bit symbols of a current transform coefficient is based on a context of a number of transform coefficients or part thereof surrounding the current transform coefficient.

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(Amended) An apparatus as claimed in claim ~~701~~ wherein said representative number equals the number of leading zero bit symbols.

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(Amended) An apparatus as claimed in claim ~~702~~ wherein said context is determined from an arrangement of surrounding transform coefficients.

241.

~~106~~ (Amended) An apparatus as claimed in claim ~~105~~, wherein said

surrounding transform coefficients are previously decoded transform coefficients.

25.

~~107~~ (Amended) An apparatus as claimed in claim ~~105~~, wherein said

context is based on the number of non-zero transform coefficients surrounding said current transform coefficient.

26.

~~108~~ (Amended) An apparatus as claimed in claim ~~101~~, wherein said

method includes a further step of decoding encoded said remaining bit symbols.

27.

~~109~~ (Amended) An apparatus for decompressing data, wherein said data

once decompressed comprises a plurality of transform coefficients, and each transform coefficient is expressible in a format comprising a plurality of bit symbols, the apparatus including:

entropy decoder means for entropy decoding an encoded bit symbol of a current transform coefficient based on a number of surrounding bit symbols and on whether or not the most significant bit symbol of the current coefficient has been previously entropy decoded;

repetition means for repeating the operation of the entropy decoder means a redetermined number of times for the current transform coefficient; and

generation means for generating another transform coefficient in accordance with the operation of the entropy decoder means and the repetition means.

98.  
110. (Amended) An apparatus as claimed in claim 109, wherein the entropy decoding of one or more bit symbols of a current transform efficient is based on a context of a number of surrounding bit symbols and on whether or not the most significant bit symbol of the current coefficient has been previously entropy coded.

101.  
113. (Amended) An apparatus as claimed in claim 110, wherein said context of surrounding bit symbols includes information as whether or not a most significant bit of at least one transform coefficient spatially adjacent, to the current transform coefficient, is encoded or decoded.

102.  
114. (Amended) An apparatus as claimed in claim 109, wherein said transform coefficients are represented in a bit-plane representation and said surrounding bit symbols are bit symbols in a current bit-plane.

103.  
115. (Amended) An apparatus as claimed in claim 101, wherein said entropy decoder means is an arithmetic coder.

104.  
116. (Amended) An apparatus as claimed in 101, wherein said apparatus further includes an inverse transform means for inverse Discrete Wavelet Transforming the transform coefficients.

105.  
117. (Amended) A computer readable medium comprising a computer program for compressing data, wherein said data comprises a plurality of transform

coefficients, and each transform coefficient is expressible in a format including a plurality of bit symbols, the format comprising a number of leading zero bit symbols and remaining bit symbols, the computer program comprising:

entropy encoder means for entropy encoding a number representative of said number of leading zero bit symbols, not previously entropy coded, of a current transform coefficient based on a number of transform coefficients or part thereof surrounding said current transform coefficient; and

processor means for processing another transform coefficient, not previously entropy coded, in accordance with the operations of the entropy encoder means.

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(Amended) A computer readable medium comprising a computer program for compressing data, wherein the data comprises a plurality of transform coefficients and each transform coefficient is expressible in a format comprising a plurality of bit symbols, the computer program comprising:

entropy encoder means for entropy encoding one of said bit symbols, not previously entropy coded, of a current transform coefficient based on a number of surrounding bit symbols and on whether or not the most significant bit symbol of the current coefficient has been previously entropy encoded;

repetition means for repeating the operation of the entropy encoder a predetermined number of times for the current transform coefficient; and

processor means for processing another transform coefficient in accordance with the operations of the entropy encoder means and repetition means.

107.

N9. (Amended) A computer readable medium comprising a computer program for decompressing data, wherein said data once decompressed comprises a plurality of transform coefficients and each transform coefficient is expressible in a format comprising a plurality of bit symbols, the format comprising a number of leading zero bit symbols and remaining bit symbols, the computer program comprising:

entropy decoder means for entropy decoding an encoded number representative of said number of leading zero bit symbols of a current transform coefficient based on a number of transform coefficients or part thereof surrounding said current coefficient; and

processor means for processing another transform coefficient in accordance with the operations of the entropy decoder means.

108.

T20 (Amended) A computer readable medium comprising a computer program for decompressing data, wherein said data once decompressed comprises a plurality of transform coefficients, and each transform coefficient is expressible in a format comprising a plurality of bit symbols, the computer program comprising:

entropy decoder means for entropy decoding an encoded bit symbol of a current transform coefficient based on a number of surrounding bit symbols and on whether the most significant bit symbol of the current coefficient has been previously entropy decoded;

repetition means for repeating the operation of the entropy decoder means a predetermined number of times for the current transform coefficient; and